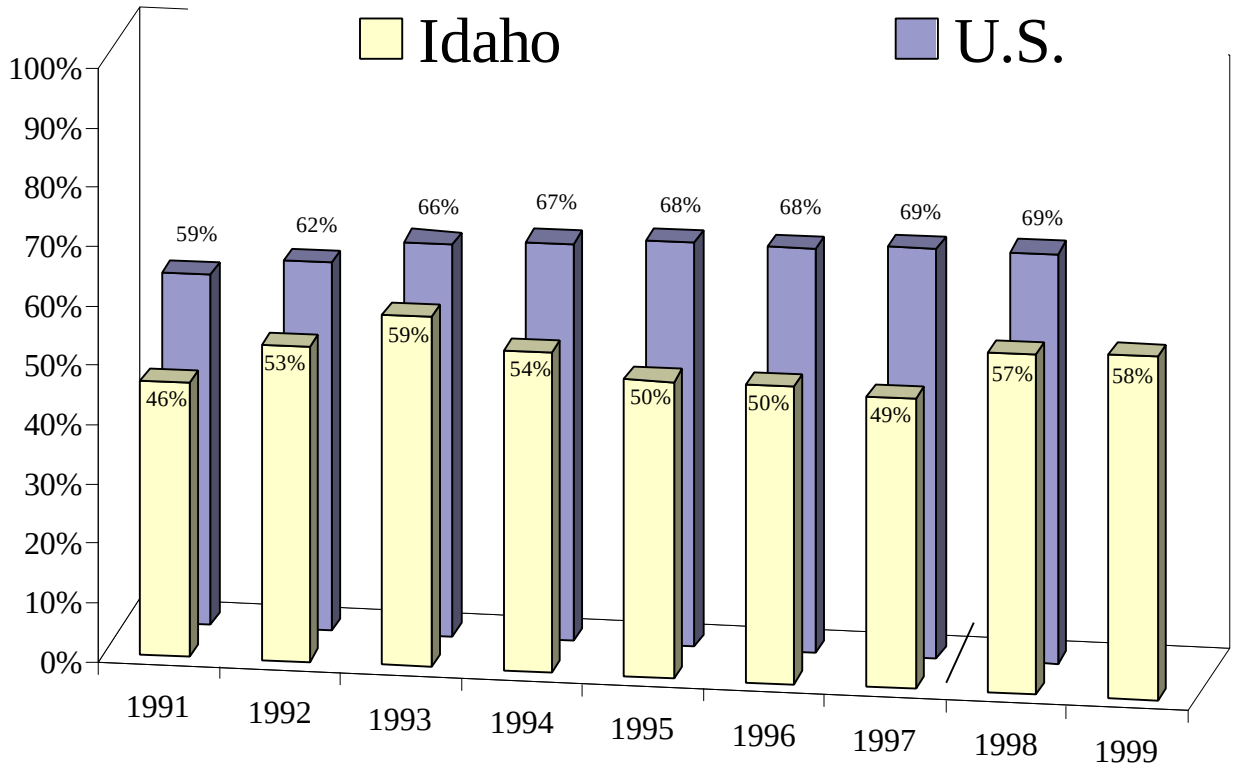
Safety Restraint Usage

Idaho's seat belt use law, effective July 1, 1986, requires seat belt use for front seat passengers and drivers, regardless of residency, in vehicles with a gross vehicle weight of 8,000 pounds or less that were manufactured with safety belts. The law is a "secondary" law and can only be enforced when someone is stopped for another traffic violation. Idaho's child restraint law is a primary enforcement law.

The Office of Highway Safety evaluates compliance rates through analysis of collision data and statewide observational surveys of seat belt use. Observational surveys are conducted by observing shoulder harness use or non-use.

Figure 11 depicts observed shoulder harness use by year for both Idaho and the U.S. The figures are the observed rates for persons in passenger cars, pickups, sport utility vehicles, and vans, which make up over 90% of the vehicles involved in motor vehicle crashes. Seat belt use increased after passage of Idaho's secondary law in 1986 and again when enforcement and public information campaigns were intensified in the early 1990's. The U.S. usage rate is based on a combination of observational surveys from all 50 states. At the time of printing this publication, a 1999 U.S. use estimate was not available.

Figure 11
Observed Seat Belt Usage – Idaho vs. U.S.: 1991 - 1999



Observational Seat Belt Survey Results

Table 27 shows the observed shoulder harness seat belt use by county. The methodology for the observational seat belt survey was changed in 1998 in accordance with the National Highway Traffic Safety Administration (NHTSA) guidelines. An entirely new sample of counties and observation sites was selected using a two-stage probabilistic sampling method. The method of analysis also changed to correct for the probabilistic sampling and determine the standard error correctly. Comparisons of 1998 and future surveys to historical data (1986 – 1997 surveys) should be made with caution as the new methodology differs greatly from the previous methodology.

Table 27
Observed Seat Belt Use by County: 1996-1999

	1996	1997	1998	1999	Change 1998-99	Avg. Yearly Change 1996-98
Ada	62.0%	61.2%	67.6%	65.8%	-2.6%	4.6%
Bannock	45.8%	46.2%	42.3%	48.7%	15.2%	-3.8%
Bingham	31.6%	28.1%	36.6%	39.7%	8.6%	9.5%
Blaine	----	----	48.8%	48.9%	0.1%	----
Bonner	63.6%	58.0%	58.4%	48.4%	-17.1%	-4.1%
Bonneville	52.3%	38.9%	54.0%	58.8%	8.8%	6.6%
Canyon	52.7%	59.4%	57.8%	62.9%	8.9%	5.0%
Caribou	22.7%	29.2%	----	----	----	----
Cassia	34.8%	35.8%	33.4%	38.7%	15.7%	-1.9%
Clearwater	51.1%	37.7%	----	----	----	----
Elmore	----	----	52.7%	47.3%	-10.3%	----
Franklin	25.2%	30.9%	----	----	----	----
Kootenai	61.1%	61.5%	60.6%	53.4%	-11.9%	-0.4%
Latah	63.3%	64.4%	58.6%	60.5%	3.2%	-3.6%
Lemhi	28.4%	29.6%	----	----	----	----
Madison	41.1%	31.9%	43.7%	41.6%	-4.8%	7.3%
Minidoka	37.2%	25.5%	29.5%	35.6%	20.7%	-7.9%
Nez Perce	56.9%	48.3%	63.1%	57.0%	-9.7%	7.8%
Payette	----	----	65.5%	66.6%	1.7%	----
Twin Falls	40.6%	46.2%	39.8%	46.4%	16.6%	0.0%

Table 28 shows the observed seat belt use for the Idaho Transportation Department (ITD) districts [4] by vehicle type. District 3 (south western Idaho) had the highest overall usage at 65%, while district 4 (south central Idaho) had the overall lowest usage at 42%.

Table 28
Idaho Safety Belt Observation Survey: 1999 – Usage by Vehicle Type

ITD District	Passenger Cars	Vans and Sport Utility Vehicles	Pickup Trucks	All Vehicles
1	59.1%	56.4%	39.6%	52.1%
2	62.6%	64.1%	45.4%	58.5%
3	69.5%	65.7%	56.4%	64.7%
4	48.6%	53.4%	25.9%	42.2%
5	49.8%	49.9%	31.2%	45.2%
6	56.9%	56.2%	36.2%	51.6%
Statewide	**63.1%**	**61.2%**	**46.9%**	**57.9%**

Usage rates for the occupants of pickup trucks continue to be significantly lower than usage rates for other types of passenger vehicles. The usage rate for pickup truck occupants in 1999 ranged from a high of 59.7% in Payette County to a low of 22.5% in Bingham County.

Seat belt usage also varied by the type of roadway on which the vehicles were observed. It ranged from a high of 74.9% on urban interstates to a low of 35.2% on rural minor collectors. While there was no difference between urban and rural sites, there was a difference of 9 percentage points between major and minor roads. The difference was not statistically significant. Major roads were defined as interstates and principal arterials. Minor roads were comprised of the rest of the roadway functional classifications.

Self-Reported Seat Belt Usage Results

Table 29 shows the self-reported seat belt use for people, ages 4 and older, in passenger cars, pickups, sport utility vehicles and vans that were killed or seriously injured. Research has indicated there is a tendency for persons involved in collisions to falsely report compliance with the seat belt law and thus, self-reported use tends to overstate actual use[5]. Seat belt use by severely or fatally injured occupants can be more directly assessed by law enforcement officers or emergency medical personnel, and is therefore, more reliable.

Table 29
Self-Reported Seat Belt Use : 1996-1999
(Age 4 and older in Passenger Cars, Pickups, Sport Utility Vehicles, and Vans)

Injury Type	1996	1997	1998	1999	Change 1998-99	Avg. Yearly Change 1996-98
Fatalities -Restraints Used	28.0%	22.0%	27.4%	22.8%	-16.8%	1.6%
Serious Injuries -Restraint Used	46.4%	46.7%	48.5%	50.0%	3.1%	2.3%

Of the 237 motor vehicle occupants killed in 1999, only 54 were using seat belts. The National Highway Traffic Safety Administration estimates seat belts are 50% effective in preventing fatalities and serious injuries. By this estimate, we can deduce that 54 lives were saved in 1999 by seat belt usage. An additional 92 lives could have been saved if everyone had buckled up.

Costs of Injuries

Table 30 illustrates the costs of injuries sustained by occupants, over the age of four, of passenger vehicles for persons both using and not using safety restraints.

Table 30
1999 Costs of Injuries
Persons Using Safety Restraints versus Persons Not Using Safety Restraints

	Safety Restraints		Costs of Injuries	
Injury Type	Used	Not Used	Used	Not Used
Fatality	54	183	$156,464,594	$530,241,125
Serious Injury	769	769	$154,258,042	$154,258,042
Visible Injury	2,874	1,817	$115,302,370	$72,896,453
Possible Injury	4,826	1,677	$102,185,645	$35,508,770
Total			**$528,210,651**	**$792,904,391**

The cost of injuries for persons not using safety restraints was $264.7 million dollars more than for those who were using safety restraints. This is a conservative estimate of the difference. The true difference may be higher since many of the people may have falsely reported their seat belt usage.

Child Safety Seat – Self-Reported Usage

Table 31 shows self-reported child safety seat use for children, under age 4, in passenger cars, pickups, sport utility vehicles, and vans from 1996 to 1999. Overall, the use rate has increased from 61% in 1996 to 78% in 1999. Idaho Code requires every child, under the age of four, and weighing less than 40 pounds be restrained in a car safety seat which meets the federal standards when traveling in a noncommercial motor vehicle manufactured with seat belts after January 1, 1966.

Table 31
Self-Reported Child Safety Seat Use by Injury Type: 1996-1999
(under age 4 in passenger cars, pickups, sport utility vehicles and vans)

Injury Type	1996	1997	1998	1999	Change 1998-99	Avg. Yearly Change 1996-98
Fatalities						
Restrained	2	2	2	4	100.0%	0.0%
Unrestrained	4	2	6	1	-83.3%	75.0%
Serious Injuries						
Restrained	5	9	7	3	-57.1%	28.9%
Unrestrained	15	10	10	9	-10.0%	-16.7%
Visible Injuries						
Restrained	39	38	38	51	34.2%	-1.3%
Unrestrained	41	49	36	35	-2.8%	-3.5%
Possible Injuries						
Restrained	90	66	91	73	-19.8%	5.6%
Unrestrained	91	56	45	34	-24.4%	-29.1%
No Injuries						
Restrained	1,072	1,157	1,326	1,262	-4.8%	11.3%
Unrestrained	620	499	459	317	-30.9%	-13.8%
Total Restrained	1,208	1,280	1,469	1,396	-5.0%	10.4%
Total Unrestrained	771	619	562	397	-29.4%	-14.5%
% of Children Restrained	61.0%	67.4%	72.3%	77.9%	7.6%	8.9%

The National Highway Traffic Safety Administration estimates child safety seats are 69% effective in preventing fatalities and serious injuries. By this estimate we can deduce that child safety seats saved 8 lives in 1999. Additionally, the 1 unrestrained child killed in 1999 would have had a much greater chance of surviving the collision if he had been properly restrained.

Local Safety Restraint Usage

Table 32 presents self-reported restraint use rates for counties comparing 1996 through 1999. Collision data provides an analysis of the restraint use at the local level. This information is self reported to the investigating officer after a collision. Self-reported usage is consistently higher than observational seat belt usage.

Table 32
Self-Reported Restraint Use by County: 1996-1999
(persons in passenger cars, pickups, sport utility vehicles and vans only)

County by Population	1996	1997	1998	1999	Change 1998-99	Avg. Yearly Change 1996-98
50,000 and over						
Ada	81.3%	78.7%	83.3%	82.8%	-0.6%	1.3%
Bannock	74.5%	74.8%	76.6%	79.5%	3.8%	1.4%
Bonneville	74.1%	71.5%	72.2%	73.5%	1.8%	-1.3%
Canyon	76.3%	74.8%	75.7%	78.7%	4.0%	-0.4%
Kootenai	80.3%	82.2%	81.8%	82.4%	0.7%	0.9%
Twin Falls	73.4%	70.8%	71.7%	72.6%	1.3%	-1.1%
20,000 - 49,999						
Bingham	56.3%	62.3%	61.2%	63.1%	3.1%	4.4%
Bonner	75.5%	73.9%	77.7%	75.5%	-2.8%	1.5%
Cassia	70.2%	63.1%	68.2%	65.6%	-3.8%	-1.0%
Elmore	74.6%	69.2%	71.9%	76.4%	6.3%	-1.7%
Latah	81.9%	81.8%	80.8%	82.2%	1.7%	-0.7%
Madison	63.5%	62.4%	64.0%	69.5%	8.6%	0.4%
Minidoka	66.2%	67.5%	64.6%	59.2%	-8.4%	-1.2%
Nez Perce	78.6%	76.2%	81.8%	80.8%	-1.2%	2.1%
Payette	77.4%	72.5%	75.0%	76.9%	2.5%	-1.4%
10,000 - 19,999						
Blaine	71.5%	69.8%	77.0%	76.9%	-0.1%	4.0%
Franklin	56.0%	51.0%	65.3%	70.3%	7.7%	9.6%
Fremont	67.4%	59.0%	60.3%	70.8%	17.4%	-5.1%
Gem	58.2%	61.8%	61.6%	55.9%	-9.3%	2.9%
Gooding	58.2%	59.6%	54.6%	58.5%	7.1%	-3.0%
Idaho	69.5%	68.9%	64.7%	66.7%	3.1%	-3.5%
Jefferson	60.5%	63.5%	66.7%	67.3%	0.9%	5.0%
Jerome	67.0%	72.8%	73.5%	69.6%	-5.3%	4.8%
Shoshone	79.1%	73.6%	67.5%	65.1%	-3.6%	-7.6%
Washington	52.9%	67.0%	61.9%	62.4%	0.8%	9.5%

Table 32 (Continued)
Self-Reported Restraint Use by County: 1996-1999
(persons in passenger cars, pickups, sport utility vehicles and vans only)

County by Population	1996	1997	1998	1999	Change 1998-99	Avg. Yearly Change 1996-98
5,000 - 9,999						
Bear Lake	69.1%	52.2%	64.1%	61.8%	-3.6%	-0.8%
Benewah	67.9%	66.9%	66.3%	66.1%	-0.3%	-1.2%
Boise	75.4%	73.3%	70.9%	78.7%	11.0%	-3.0%
Boundary	77.7%	80.5%	74.1%	74.7%	0.8%	-2.2%
Caribou	61.0%	62.1%	61.3%	65.0%	6.0%	0.3%
Clearwater	61.7%	59.3%	73.5%	61.1%	-16.9%	10.0%
Lemhi	41.6%	47.8%	43.4%	41.3%	-4.8%	2.8%
Owyhee	54.1%	70.9%	63.7%	63.9%	0.3%	10.4%
Power	61.8%	66.2%	74.3%	66.8%	-10.1%	9.7%
Valley	74.7%	65.8%	74.2%	82.1%	10.6%	0.4%
0 - 4,999						
Adams	65.9%	71.1%	70.8%	69.3%	-2.1%	3.7%
Butte	67.5%	63.9%	41.4%	54.2%	30.9%	-20.3%
Camas	73.0%	59.4%	55.2%	63.2%	14.5%	-12.9%
Clark	75.2%	65.6%	79.1%	82.1%	3.8%	3.9%
Custer	59.0%	68.8%	63.1%	73.8%	17.0%	4.2%
Lewis	55.3%	61.3%	57.2%	60.2%	5.2%	2.1%
Lincoln	64.2%	63.2%	61.8%	53.0%	-14.2%	-1.9%
Oneida	67.8%	67.0%	61.3%	64.9%	5.9%	-4.8%
Teton	69.2%	56.8%	63.3%	53.8%	-15.0%	-3.2%
Statewide Average	**72.9%**	**72.8%**	**74.5%**	**76.3%**	**2.4%**	**1.1%**